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# Judges' Retirement System II Actuarial Valuation as of June 30, 2008

Establishing the Recommended Employer Contribution for the Fiscal Year July 1, 2009 through June 30, 2010

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#### **Actuarial Certification**

#### Certification

To the best of our knowledge, this report is complete and accurate and contains sufficient information to fully and fairly disclose the actuarial funded condition of the Judges' Retirement System II as of June 30, 2008. Based on the employee data provided by the Judges' Retirement System administrative staff at CalPERS, the statement of assets provided by the CalPERS Fiscal Services Division, and the benefits as outlined in Appendix B, it is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles and that the assumptions and methods are reasonable for this plan.

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# **Highlights and Executive Summary**

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#### **Highlights and Executive Summary**

### Report

Purpose of the This actuarial valuation of the Judges' Retirement System II of the State of California was performed by CalPERS staff actuaries as of June 30, 2008 in order to:

- set forth the actuarial assets and funding liabilities of this plan as of June 30, 2008;
- establish the actuarially determined recommended contribution rate for this plan for the fiscal year July 1, 2009 through June 30, 2010;
- provide actuarial information as of June 30, 2008, to the CalPERS Board of Administration and other interested parties, and
- provide pension information as of June 30, 2008 under Governmental Accounting Standards Board (GASB) Statement Number 27.

The use of this report for other purposes may be inappropriate.

#### **Employer** Contribution Rate

This is the fourteenth annual actuarial valuation of the Judges' Retirement System II. This system began on November 9, 1994, to provide retirement and ancillary benefits to judges elected or appointed on or after that date. The employer contribution rate from the inception of the plan until June 30, 1996, was set by State statute. Subsequently, the employer contribution rate was determined through an actuarial valuation process. This actuarial valuation sets forth the employer contribution rate for the plan for the fiscal year July 1, 2009 through June 30, 2010. The employer contribution rate for the period July 1, 2008 through June 30, 2009 is shown for comparison purposes.

#### **Employer Contribution Rate**

Fiscal Year Fiscal Year July 1, 2008 - June 30, 2009 July 1, 2009 - June 30, 2010 20.227% 20.358%

# **Employer Contribution Rate History**

This table provides the employer contribution rates for the Judges' Retirement System II from its inception to the rate established by this valuation.

Fiscal Year	<b>Contribution Rate</b>
1995-96	18.800%
1996-97	19.170%
1997-98	21.920%
1998-99	21.540%
1999-00	18.567%
2000-01	18.130%
2001-02	18.508%
2002-03	19.231%
2003-04	19.217%
2004-05	20.252%
2005-06	19.848%
2006-07	19.917%
2007-08	19.916%
2008-09	20.227%
2009-10	20.358%

# Funded Status of the Plan

The tables below summarize the funded status of the Judges' Retirement System II as of June 30, 2008 on both an Actuarial Value of Asset and a Market Value basis.

#### Funded Status on a Market Value Basis June 30, 2008

Aggregate Entry		
Age Normal	Market Value of	<b>Funded</b>
<b>Accrued Liability</b>	Assets	Ratio
\$ 366,513,989	\$ 325.451.000	88.8%

#### Funded Status for Rate Setting Purposes June 30, 2008

Aggregate Entry		
Age Normal	<b>Actuarial Value of</b>	Funded
Accrued Liability	Assets	Ratio

History of Funded Status and Funding Progress Shown below is the history of funding progress for the plan. One could view the trend in the ratio of the unfunded liability to covered payroll as a measure of the ability of the employer to address the unfunded liability.

Valuation Date	Aggregate Entry Age Normal Accrued Liability	Actuarial Value of Assets (AVA)	Funded Ratio (AVA)	Market Value of Assets (MVA)	Funded Ratio (MVA)	Unfunded Accrued Liability/ (Surplus) (AVA)	Projected Annual Covered Payroll*	Unfunded as a % of Covered Payroll
6/30/95	\$ 70,657	\$ 239,474	338.9%	\$ 239,474	338.9%	(\$168,817)	\$ 3,944,181	(4.3%)
6/30/96	2,812,567	2,387,870	84.9%	2,387,870	84.9%	424,697	11,762,307	3.6%
6/30/97	7,906,056	7,242,314	91.6%	7,242,314	91.6%	663,742	21,220,469	3.1%
6/30/98	15,043,465	15,120,408	100.5%	16,256,101	108.1%	(76,943)	32,960,219	(0.2%)
6/30/99	26,921,274	27,154,854	100.9%	28,372,726	105.4%	(233,580)	41,448,759	(0.6%)
6/30/00	41,619,162	40,503,417	97.3%	41,354,371	99.4%	1,115,745	48,450,504	2.3%
6/30/01	60,933,072	55,954,506	91.8%	51,981,931	85.3%	4,978,566	69,937,653	7.1%
6/30/02	76,459,252	71,928,890	94.1%	65,389,900	85.5%	4,530,362	80,237,849	5.7%
6/30/03	105,116,289	96,107,358	91.4%	90,713,575	86.3%	9,008,931	95,612,128	9.4%
6/30/04	137,703,630	129,152,543	93.8%	129,315,504	93.9%	8,551,087	108,842,477	7.9%
6/30/05	177,760,708	167,556,473	94.3%	171,875,047	96.7%	10,204,235	122,280,588	8.3%
6/30/06	220,134,685	212,903,528	96.7%	218,986,736	99.5%	7,231,157	136,602,126	5.3%
6/30/07	294,982,560	267,604,460	90.7%	290,733,043	98.6%	27,378,100	174,473,271	15.7%
6/30/08	366,513,989	334,903,486	91.4%	325,451,000	88.8%	31,610,503	190,413,674	16.6%

<sup>\*</sup>Projected from the valuation date using a half year of the expected payroll growth assumption

#### Changes Since Prior Valuation

Actuarial Assumptions – No changes were made since the prior valuation.

Actuarial Methods – No changes were made since the prior valuation

Plan Provisions - No changes were made since the prior valuation.

# Comparison of Current and Prior Year Results

The table on the following page is a comparison of key valuation results for the current valuation date to the corresponding values from the prior valuation date.

#### Judges' Retirement System II Actuarial Valuation – June 30, 2008

Valuation Results	June 30, 2007	June 30, 2008
Members Included in the Valuation		
Active Members	912	978
Vested Terminated Members	3	4
Receiving Benefits	11	15
Total	926	997
Annual Covered Payroll	\$ 156,251,856	\$ 175,346,032
Projected Annual Payroll for	\$ 212,309,886	\$ 219,852,796
Contribution Year	4-1-0-0	4-0-00
Average Annual Pay	\$ 171,329	\$ 179,290
Average Attained Age for Actives	54.53	55.07
Average Entry Age for Actives	48.64	48.71
Present Value of Benefits		
Active Members	\$ 698,698,834	\$ 802,997,350
Vested Terminated Members	639,648	1,193,899
Receiving Benefits	4,700,023	9,416,167
Total	\$ 704,038,505	\$ 813,607,416
Accrued Liability		
Active Members	\$ 289,642,889	\$ 355,903,923
Vested Terminated Members	639,648	1,193,899
Receiving Benefits	4,700,023	9,416,167
Total	\$ 294,982,560	\$ 366,513,989
Actuarial Value of Assets	\$ 267,604,460	\$ 334,903,486
Unfunded Liability/(Excess Assets)	\$ 27,378,100	\$ 31,610,503
Employer Contribution Required (in Projected Dollars)		
Payment for Normal Cost	\$ 41,808,063	\$ 43,374,758
Payment on Amortization Bases	1,136,043	1,383,875
Total	\$ 42,944,106	\$ 44,758,633
Employer Contribution Required		
(Percent of Projected Payroll) Payment for Normal Cost	19.692%	19.729%
Payment on Amortization Bases	0.535%	0.629%
Total	20.227%	20.358%
1 Otal	20.227%	20.358%

# Summary of Liabilities And Recommended Employer Contribution

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# **Summary of Liabilities and Recommended Employer Contribution**

Development of Employer Normal Cost	The table below illustrates the development of employer normal cost.					
Normal Cost	<ol> <li>Present Value of Benefits for Active Members at Entry Age</li> </ol>	\$	492,261,209			
	2. Present Value of Future Salaries at Entry Age	\$	1,775,231,359			
	3. Total Normal Cost Rate at Entry Age [(1)/(2)]		27.729%			
	4. Projected Covered Annual Payroll (7/1/09 – 6/30/10)	\$	219,852,796			
	<ol> <li>Total Normal Cost at Attained Age [(3)x(4)]</li> </ol>	\$	60,962,982			
	6. Expected Employee Contributions [8% x (4)]	\$	17,588,224			
	7. Employer Normal Cost [(5) - (6)]	\$	43,374,758			
	8. Employer Normal Cost Rate [(7)/(4)]		19.729%			

#### Development of Accrued & Unfunded Liability

The following table illustrates how the Accrued Liability and the Unfunded Accrued Liability are developed.

1.	Present Value of Future Benefits at the Valuation Date		
	a) Active Members	\$	802,997,350
	b) Vested Terminated Members	·	1,193,899
	c) Refunded Members		0
	d) Receiving Benefits		9,416,167
	e) Total	\$	813,607,416
2.	Present Value of Future Employee		
	Contributions at the Valuation Date		128,989,430
3.	Present Value of Future Employer Normal Cost		
	at the Valuation Date		318,103,997
4.	Accrued Liability		
	[(1e)-(2)-(3)]	\$	366,513,989
_		_	
5.	Actuarial Value of Assets	\$	334,903,486
_	TT 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<b>.</b>	24 540 502
6.	Unfunded Actuarial Liability [(4) - (5)]	\$	31,610,503

#### Gain/Loss Analysis

Shown below is an analysis of the (Gain)/Loss for the fiscal year ending on the valuation date. The Gain or Loss is shown separately for assets, contributions, and liabilities.

A.	To	otal (Gain)/Loss for the Year		
	1.	Unfunded Liability/(Surplus) as of 6/30/07	\$	27,378,100
	2.	Expected Payment on the Unfunded Liability		390,821
	3.	Interest Accumulation $[0.0725 \text{ x (A1)} - ((1 + 0.0725)^{\frac{1}{2}} - 1) \text{ x (A2)}]$		1,970,993
	4.	Expected Unfunded Liability Before Other Changes		
		[(A1) - (A2) + (A3)]	\$	28,958,272
	5.	Actual Unfunded Liability/(Surplus) as of 6/30/08		31,610,503
	6.	Total (Gain)/Loss $[(A5) - (A4)]$	\$	2,652,231
В.	Co	ontribution (Gain)/Loss for the Year		
	1.	Expected Contribution	\$	48,706,084
	2.	Expected Interest on Contributions $[((1 + 0.0725)^{1/2} - 1) \times (B1)]$		1,734,704
	3.	Actual Contribution		50,568,574
	4.	Expected Interest on Actual Contributions $[((1 + 0.0725)^{1/2} - 1) \times (B3)]$		1,801,038
	5.	Contribution (Gain)/Loss $[((B1) + (B2)) - ((B3) + (B4))]$	\$	(1,928,824)
C.		sset (Gain)/Loss for the Year		
	1.	Actuarial Value of Assets as of 6/30/07	\$	267,604,460
	2.	Contributions Received		50,568,574
	3.	Benefits and Refunds Paid		(3,666,159)
	4.	Expected Interest		
		$[0.0725 \times (C1) + ((1+0.0725)^{1/2} - 1) \times ((C2) + (C3))]$		21,071,788
	5.	Expected Actuarial Value of Assets as of 6/30/08	Φ.	225 550 662
	6.	[(C1) + (C2) + (C3) + (C4)] Actual Actuarial Value of Assets as of $6/30/08$	\$	335,578,663 334,903,486
	7.	Asset (Gain)/Loss [(C5) - (C6)]	\$	675,177
n	т:	ability (Gain)/Loss for the Year		
υ.	1.	Total (Gain)/Loss (A6)	\$	2,652,231
	2.	Contribution (Gain)/Loss (B5)	7	(1,928,824)
	3.	Asset (Gain)/Loss (C7)		675,177
	4.	Liability (Gain)/Loss [(D1) - (D2) - (D3)]	\$	3,905,878

#### Schedule of Amortization Bases

The schedule below shows the development of the proposed payment on the Amortization Bases. The rate smoothing method requires that gains and losses be combined into a single base and amortized over 30 years. Please refer to Appendix A for an explanation of how amortization periods are determined.

Reason for Base	Date Established	Remaining Amortization Period	Balance on 6/30/08		Expected Payment on UAL 08-09		Amount Remaining on 6/30/09	Scheduled Payment for Fiscal Year 2009-2010
Fresh Start	6/30/07	29	\$	28,958,273	\$	1,136,043	\$ 29,881,244	\$ 1,258,347
(Gain)/Loss	6/30/08	30		2,652,230		(187,783)	3,038,988	125,528
Total			\$	31,610,503	\$	948,260	\$ 32,920,232	\$ 1,383,875

#### Development of Employer Contribution

This table illustrates total recommended employer contribution over the course of 2009-2010. The amount of money is illustrated in dollars and then is shown as a percentage of the projected payroll that is expected over the course of the year.

1. Employer Contribution Required (in Dollars)

	a) Payment for Normal Cost	\$ 43,374,758
	b) Payment on Amortization Bases	1,383,875
	c) Total Employer Contribution Required	\$ 44,758,633
2.	Projected Annual Payroll for Contribution Year	\$219,852,796
3.	Employer Contribution Required (Percentage of Projected Payroll)	
	a) Payment for Normal Cost	19.729%
	b) Payment on Amortization Bases	0.629%
	c) Total Employer Contribution Required	20.358%

Reconciliation
of Employer
Contribution
Rates

This table illustrates how the contribution rate is calculated and how and, more importantly, why the Employer Contribution Rate differs this year from the previous year.

2008-2009 Employer Rate	20.227%
Effects of (Gain)/Loss	0.131%
2009-2010 Employer Rate	20.358%

#### Reconciliation of Estimated Employer Contribution

This table illustrates the corresponding dollar amounts to the Employer Contribution Rate that was shown above (based on projected annual payroll).

2008-2009 Estimated Employer Contribution	\$42,944,106
Effect of Change in Payroll	\$ 1,525,704
Effect of (Gain)/Loss	288,823
2009-2010 Estimated Employer Contribution	\$44,758,633

# **Summary of Assets**

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### **Summary of Assets**

The following displays the change in the Market Value of Assets from the prior valuation to the current valuation by type of transaction.

#### Reconciliation of the Market Value of Assets

1.	Beginning Balance as of 6/30/2007	\$ 290,733,043
2.	Contributions:	
	Member	13,807,651
	Employer	36,760,924
3.	Benefit Payments	(963,823)
4.	Refunds	(2,134,018)
5.	Administration Costs	(568,318)
6.	Investment Earnings	(12,184,458)
7.	Ending Balance as of 6/30/2008	\$ 325,451,000

<b>Development</b>
of the
Actuarial
Value of
Assets

The development of the Actuarial Value of Assets for the current valuation date is shown below. This is the amount of asset used in the determination of the contribution rate.

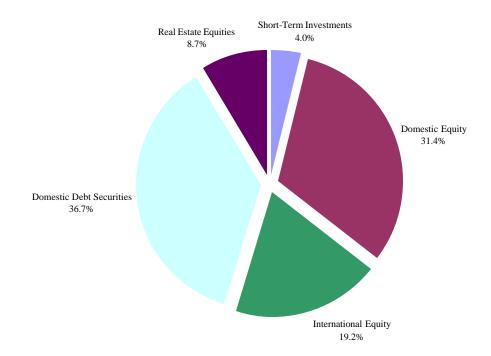
1.	Actuarial Value of Assets as of June 30, 2007	\$ 267,604,460
2.	Contributions	
	Member Contributions	13,807,651
	Employer Contributions	36,760,924
	Total Contributions	50,568,574
3.	Deductions	
	Benefit Payments	(963,823)
	Refunds	(2,134,018)
	Administration Costs	(568,318)
	Total Deductions	(3,666,159)
4.	Total Current Year Change [(2)+(3)]	46,902,415
5.	Expected Investment Return	
	$[(1) x0.0725 + (4) x ((1.0725)^{1/2} - 1)]$	21,071,788
6.	Expected Actuarial Value of Assets	
	[(1) + (4) + (5)]	335,578,664
7.	Market Value of Assets as of June 30, 2008	325,451,000
8.	One-Fifteenth of the Difference Between Market Value of	
	Assets and Expected Actuarial Value of Assets [(7) – (6)] x 1/15	(675,178)
9.	Preliminary Actuarial Value of Assets [(6) + (8)]	334,903,486
10.	Preliminary Actuarial Value to Market Value Ratio [(9) / (7)]	102.90%
11.	Final Actuarial Value to Market Value Ratio [(12) / (7)]	
	(Minimum 80%, Maximum 120%)	102.90%
12.	Final Actuarial Value of Assets as of June 30, 2008	\$ 334,903,486

#### Asset Allocation

Shown below is the Market Value of Assets, by asset type, as of the valuation date.

Cash	\$ 12,671
Investments at Market Value	
Surplus Money Investment Fund	2,884,199
Short-term Investment Fund	10,006,464
Domestic Equity	100,975,717
Domestic Debt Securities	117,855,378
International Equity	61,516,288
Real Estate Equities	27,836,032
Subtotal of Investments	\$ 321,074,079
Accounts Receivable	
Due from Other Funds	51,214
Interest Accrued on Investments	412,915
Member and Employer Contributions	4,339,698
Subtotal of Accounts Receivable	\$ 4,803,827
Accounts Payable	
Due to PERF	(216,384)
Other Program Liabilities	(223,192)
Subtotal of Accounts Payable	\$ (439,576)
Fund Balance at Market Value on Valuation Date	\$ 325,451,000

Asset Allocation Chart This is the graphical representation of how the money contained in the Judges' Retirement II Fund is allocated for investment.



Receivables and payables are not included.

# **Summary of Participant Data**

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#### **Summary of Participant Data**

### Reconciliation of Members

The below table illustrates a reconciliation of the participant data over the course of the valuation year. It identifies numerically who entered the plan, who left the plan and who remained in the plan in the same status as on the previous valuation date or who moved to a new status over the course of the year.

#### Reconciliation of Members For the Fiscal Year Ending June 30, 2008

	Actives	Inactive	Retirees and Beneficiaries	Total
As of June 30, 2007	912	3	11	926
1. New Entrants	79	0	0	79
2. Non-Vested Terminations	0	0	0	0
3. Vested Terminations	(7)	7	0	0
4. Disabilities	(3)	0	3	0
5. Retirements	(2)	0	2	0
6. Refunds/Monetary Credits Paid	0	(6)	0	(6)
7. Death with Beneficiary	(1)	0	1	0
8. Benefits Ceasing (Beneficiaries)	0	0	(2)	(2)
As of June 30, 2008	978	4	15	997

Distribution of Active Members

The following table displays the number of active participants by age and service as of June 30, 2008.

Distribution of Active Members Attained Age and Years of Service as of June 30, 2008 Years of Service at Valuation Date

0-4	5-9	10-14	15-19	20+	Total
0	0	0	0	0	0
7	0	0	0	0	7
57	8	0	0	0	65
90	55	16	0	0	161
92	89	49	0	0	230
87	88	74	0	0	249
43	72	41	0	1	157
15	33	60	1	0	109
391	345	240	1	1	978
	0 7 57 90 92 87 43 15	0 0 7 0 57 8 90 55 92 89 87 88 43 72 15 33	0       0       0         7       0       0         57       8       0         90       55       16         92       89       49         87       88       74         43       72       41         15       33       60	0       0       0       0         7       0       0       0         57       8       0       0         90       55       16       0         92       89       49       0         87       88       74       0         43       72       41       0         15       33       60       1	0       0       0       0       0         7       0       0       0       0         57       8       0       0       0         90       55       16       0       0         92       89       49       0       0         87       88       74       0       0         43       72       41       0       1         15       33       60       1       0

Distribution of Average Monthly Salaries The following table displays the average salaries of active participants by age and service as of June 30, 2008.

Distribution of Average Annual Salaries by Age and Service as of June 30, 2008 Years of Service at Valuation Date

Attained											
Age	0-4	5	-9	10-	-14	15	-19	20	0+	Ave	rage
15-34	\$ (	\$	0	\$	0	\$	0	\$	0	\$	0
35-39	\$ 178,789	\$	0	\$	0	\$	0	\$	0	\$ 17	8,789
40-44	\$ 178,789	\$ 17	8,789	\$	0	\$	0	\$	0	\$ 17	8,789
45-49	\$ 178,789	\$ 17	8,789	\$ 178	8,789	\$	0	\$	0	\$ 17	8,789
50-54	\$ 179,070	\$ 17	9,079	\$ 178	8,789	\$	0	\$	0	\$ 179	9,013
55-59	\$ 178,789	\$ 17	9,376	\$ 180	0,533	\$	0	\$	0	\$ 17	9,515
60-64	\$ 178,789	\$ 17	9,864	\$ 179	9,419	\$	0	\$ 17	8,789	\$ 17	9,447
65+	\$ 178,789	\$ 17	9,571	\$ 180	0,940	\$ 17	8,789	\$	0	\$ 18	0,210
Average	\$ 178,855	\$ 17	9,313	\$ 179	9,972	\$ 17	8,789	\$ 17	8,789	\$ 17	9,290

#### **Appendix A – Actuarial Methods and Assumptions**

#### Actuarial Funding Method

This valuation was performed using the "Aggregate Entry Age Normal" funding method. The required contribution was determined as a level percentage of payroll that, if paid from the average date of entry into the Judges' Retirement System II, provides for all benefits expected to be paid. This method is commonly used to determine contribution rates for new plans, or "tiers" of benefits. It produces stable normal costs in a population which grows at an uneven rate, as might be the case for California judges.

#### Asset Valuation Method

In order to dampen the effect of short term market value fluctuations on employer contribution rates, the following asset smoothing technique is used. First an Expected Value of Assets is computed by bringing forward the prior year's Actuarial Value of Assets and the contributions received and benefits paid during the year at the assumed actuarial rate of return. The Actuarial Value of Assets is then computed as the Expected Value of Assets plus one-fifteenth of the difference between the actual Market Value of Assets and the Expected Value of Assets as of the valuation date. However, in no case will the Actuarial Value of Assets be less than 80% nor greater than 120% of the actual Market Value of Assets. This smoothing technique is the same as that used for all CalPERS public agencies.

# **Amortization Policy**

The unfunded liability is uniquely segregated into "bases" and amortized over different periods of time as a level percentage of payroll. The policy is the same as that used for all CalPERS public agencies: all changes in liability due to plan amendments, changes in actuarial assumptions or changes in actuarial methodology will be amortized separately over a 20-year period. In addition, the annual contribution amount with regard to gains and losses is calculated over a rolling 30-year amortization period. Finally, if the plan's accrued liability exceeds its actuarial value of assets, the annual contribution with respect to the total unfunded liability may not be less than the amount produced by a 30-year amortization payment of the unfunded liability.

An exception to the funding rules above is used whenever the application of such rules results in inconsistencies. In these cases a "fresh start" approach is used. This simply means that the current unfunded actuarial liability is projected and amortized over a set number of years. It generally occurs when a total negative rate would result or a positive payment would be required on a negative unfunded

actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability). The amortization period depends upon the situation. However, the minimum employer contribution rate is equal to the employer normal cost minus a 30-year amortization of any surplus.

# Actuarial Assumptions

The actuarial assumptions used in the valuation are shown below. These assumptions are based upon recommendations from both CalPERS actuarial staff and outside consulting actuaries. The assumptions did not change from the prior year's valuation.

# **Economic Assumptions**

The following table identifies the economic assumptions used in the valuation.

	June 30, 2008
Gross Investment Return:	7.75%
Less Administrative Expense:	0.50%
Net Investment Return, compounded annually:	7.25%
Individual Salary Increases, compounded annually:	3.25%
Inflation:	3.00%

#### Overall Payroll Growth:

The segregated bases of the unfunded liability are amortized as a level percentage of payroll. In order to amortize a base over a level percentage of payroll in a plan that is growing at an uneven rate, the bases must be amortized by an increasing annuity. An increasing annuity table is derived each year using the following methodology. The average pay is projected to increase by 3.25% each year. The number of actives is projected to increase each year by the projected decrease in the Judges' Retirement System I (JRS I). The decrease in the number of actives in JRS I is computed by projecting the active population of JRS I (a closed group) for each year starting June 30, 2007. The projected payroll is the product of the number of actives and average pay.

#### Service Retirement

The table below illustrates the assumptions used in the valuation to determine the probability of a judge retiring out of the system.

Service Greater than 20 years

Age	Rate
Below 65	0.000
65	0.750
66	0.400
67	0.300
68	0.350
69	0.500
70*	1.000

<sup>\*</sup> For Judges age 70 and older with 5 or more years of service the probability of retirement is 100%.

#### Withdrawal

Rates vary by age and years of service as shown in the table below.

Entry		Years of Service								
Age	0-1	1-2	2-3	3-4	4-5	5 or more				
35	0.00525	0.00525	0.00525	0.00525	0.00525	0.00225				
40	0.00450	0.00450	0.00450	0.00450	0.00450	0.00375				
45	0.00375	0.00375	0.00375	0.00375	0.00375	0.00750				
<b>50</b>	0.00375	0.00375	0.00375	0.00375	0.00375	0.00900				
55	0.00000	0.00000	0.00000	0.00000	0.00000	0.00825				
60	0.00000	0.00000	0.00000	0.00000	0.00000	0.00750				

Pre-Retirement Non-Industrial Mortality and Disability Rates vary by age as shown in the table below.

Attaine d Age	Pre-Retirement Mortality	Non- Industrial Disability
35	0.00079	0.00000
40	0.00122	0.00100
45	0.00164	0.00190
50	0.00256	0.00320
55	0.00365	0.00540
60	0.00577	0.00850
65	0.01064	0.01220
70	0.00000	0.00000

Industrial Mortality Rates are zero.

Industrial Disability

Rates are zero.

Post Retirement Mortality The 1994 Group Annuity Mortality Table, for males and females.

Age	Healthy Male	Healthy Female	Non- Industrial Disability	Age	Healthy Male	Healthy Female	Non- Industrial Disability
35	0.00085	0.00048	0.02000	75	0.03721	0.02269	0.09100
40	0.00107	0.00071	0.02480	80	0.06203	0.03940	0.11350
45	0.00158	0.00097	0.02930	85	0.09724	0.06774	0.15350
50	0.00258	0.00143	0.03600	90	0.15293	0.11627	0.21350
55	0.00443	0.00229	0.04520	95	0.23361	0.18621	0.29370
60	0.00798	0.00444	0.05780	100	0.31724	0.27643	0.39770
65	0.01454	0.00864	0.06910	105	0.40722	0.38360	0.80000
70	0.02373	0.01373	0.07860	110	0.48675	0.48233	1.00000

**Marital Status** 

Probability of being married at service retirement or disability retirement is 90%.

**Age of Spouse** 

Assumes that female spouses are three years younger than male spouses.

Monetary Credit Plan Assumptions The actuarial assumptions used to convert the balance in the Monetary Credit Plan to an annuity value are those used in the valuation of this plan and are stated above.

#### **Appendix B – Summary of Principal Plan Provisions**

#### **Background**

Judges' Retirement System II (JRS II) was established in 1994 to create a fully funded, actuarially-sound retirement system for judges appointed or elected on or after November 9, 1994. This system provides a unique combination of two basic types of retirement allowances: a defined benefit plan and a monetary credit plan. The defined benefit plan provides a lifetime monthly retirement allowance of up to 75 percent of final compensation. The monetary credit plan allows for a refund of member contributions, employer contributions (see below) and interest at retirement.

#### Membership

The JRS II provides retirement, death, withdrawal and disability benefits for Supreme and Appellate Court Justices, Superior Court Judges, and Municipal Court Judges who are appointed or elected on or after November 9, 1994, and their beneficiaries.

#### Member Contributions

Members of the system contribute 8% of their annual compensation to the plan.

#### Monetary Credit Account

Members accrue monthly monetary credits equal to 18% of monthly salary. These monetary credits are accumulated in a Monetary Credit Account for each member and also credited with earnings monthly at a rate, not less than zero, equal to the annual net earnings rate achieved by the Fund. The Monetary Credit Account provides an optional benefit at eligible retirement ages (described below) if the member chooses this option. If a member withdraws from the system before he or she has vested (accumulated at least 5 years of service), the member is paid the amount of his or her 8% of salary contributions to the system, but not the full Monetary Credit Account. After 5 years of service however, the Monetary Credit Account becomes the property of the member upon withdrawal.

#### Service Retirement

*Eligibility* - Judges must be at least age 65 with 20 years or more of service or age 70 with a minimum of 5 years of service. Two types of service retirement are available: Defined Benefit Plan or Monetary Credit Plan. Election of a plan must be made within 30 days after retirement.

Defined Benefit Plan - This option provides a "defined benefit" of

3.75% of the highest 12-month average salary per year of service, up to 75% of final average pay for judges reaching age 65 with at least 20 years of service. The normal form of payment is a joint and 50% contingent annuity with the spouse as contingent annuitant. This provides a surviving spouse with a monthly allowance equal to 50% of the judge's allowance. Optional settlements are available which reduce a judge's normal retirement benefit.

**Monetary Credit Plan** - This option provides a cash payment in a single lump sum or the member may elect to receive an annuity at retirement based on the value of his or her Monetary Credit Account.

#### Non-Industrial Disability Retirement (Non-Work Related)

*Eligibility* - Judges who have five years of service and become permanently disabled because of a mental or physical disability may apply to the Commission On Judicial Performance for disability retirement.

**Benefit** - An allowance, based upon the judge's age, equal to the lesser of the following:

- 3.75% of final compensation multiplied by the number of years of service the judge would have been credited had he or she continued to work until the age he or she would have first been eligible to retire, or
- 65% of the judge's average monthly salary during the 12 months preceding the retirement date.

The normal form of payment is a joint and 50% contingent annuity with the spouse as the contingent annuitant.

#### Industrial Disability Retirement (Work Related)

**Benefit** - Judges receive 65% of the judge's average monthly salary during the 12 months preceding the retirement date regardless of age or length of service.

The normal form of payment is a joint and 50% contingent annuity with the spouse as the contingent annuitant.

#### Non-Industrial Pre-Retirement

*If Eligible for Service Retirement* - Spouses receive either the monthly retirement allowance equal to one-half of the judge's "defined benefit" plan allowance or the judge's monetary credits.

#### **Death Benefit**

*If Not Eligible for Service Retirement* - Spouses receive the judge's monetary credits or three times the annual salary at the time of death paid in 36 monthly installments, whichever is greater.

# Industrial PreRetirement Death Benefit

If a judge dies in office, is age 65 or older with a minimum of 20 years of service and elects to have this provision apply (one time irrevocable election while judge is in office) then a payment to the surviving spouse is payable upon death. The spouse would receive a monthly allowance equal to the allowance paid to the judge had he or she retired immediately preceding death.

#### Post Retirement Death Benefit

If the Judge elected the Defined Benefit Plan - The surviving spouse of a retired judge who elected an Optional Settlement in the defined benefit plan receives one of four options:

- Option 1 return of unused accumulated contributions;
- Option 2 4 the Optional Settlement Benefit, the amount varies based on the option chosen by the member.

If the Judge elected the Monetary Credit Plan - If the full amount of monetary credits was received in a lump sum, there are no survivor benefits. If the judge elected the Monetary Credit Plan with benefits paid as an annuity, the spouse receives the amount based on the option chosen at retirement.

#### Cost-Of-Living Adjustments (COLA)

If the Judge elected the Defined Benefit Plan - The retirement allowance of retired judges who have elected the defined benefit plan will be adjusted every January after the judge has been retired six months. The adjustment is based on the United States city average of the "Consumer Price Index For All Urban Consumers," as published by the United States Bureau Of Statistics. No adjustment shall be made unless the cost-of-living increase equals or exceeds one percent (1%). Further, the allowance shall not be increased more than three percent (3%) in a single year. Increases shall be compounded.

#### Appendix C – GASB Statement No. 27

#### **GASB 27**

Under GASB 27, an employer reports an annual pension cost (APC) equal to the annual required contribution (ARC) plus an adjustment for the cumulative difference between the APC and the employer's actual plan contributions for the year. The cumulative difference is called the net pension obligation (NPO). The ARC for the period July 1, 2009 to June 30, 2010 has been determined by an actuarial valuation of the plan as of June 30, 2008. The contribution rate for the indicated period is 20.358% of payroll. In order to calculate the dollar value of the ARC for inclusion in financial statements prepared as of June 30, 2010, this contribution rate, as modified by any amendments for the year, would be multiplied by the payroll of covered employees that was actually paid during the period July 1, 2009 to June 30, 2010. The employer and the employer's auditor are responsible for determining the NPO and the APC.

#### Retirement Program Assumptions

A summary of principal assumptions and methods used to determine the ARC is shown below.

More complete information on assumptions and methods is provided in Appendix A of this report. Appendix B contains a description of benefits included in the valuation.

Valuation Date June 30, 2008

Actuarial Cost Method Aggregate Entry Age Normal Cost Method

Amortization Method Level Percent of Payroll

Average Remaining Period 30 Years as of the Valuation Date

Valuation Method 15 Year Smoothed Market

**Actuarial Assumptions** 

Investment Rate of Return 7.25% (net of administrative expenses)

Projected Salary Increases 3.25% Inflation 3.00%

Payroll Growth 3.25% to 13.05%\*

Individual Salary Growth 3.25%

<sup>\*</sup> The average pay is projected to increase by 3.25% each year. The number of actives is projected to increase each year by the projected decrease in the Judges' Retirement System I (JRS I). The decrease in the number of actives in JRS I is computed by projecting the active population of JRS I (a closed group) for each year starting June 30, 2008. The projected payroll is the product of the number of actives and average pay.

#### Schedule of Funding Progress

The Schedule of Funding Progress below shows the recent history of the actuarial value of assets, actuarial accrued liability, their relationship, and the relationship of the unfunded actuarial accrued liability to payroll.

Valuation Date	110111111		Actuarial Value of Assets (b)	Unfunded Liability (UL) (a)-(b)	Funded Status (b)/(a)	Annual Covered Payroll (c)	UL As a % of Payroll [(a)-(b)]/(c)
06/30/08	\$	366,513,989	\$ 334,903,486	\$ 31,610,503	91.4%	\$ 175,346,032	18.0%
06/30/07		294,982,560	267,604,460	27,378,100	90.7%	156,251,856	17.5%
06/30/06		220,134,685	212,903,528	7,231,157	96.7%	125,318,592	5.8%

#### Discussion of Payroll Growth Assumption

As discussed in Agenda item 5 of the June 20, 2006 Benefits and Program Administration Committee, the payroll growth assumption used in calculating the ARC is not in accordance with the requirements of paragraph 10(f)(3) of GASB Statement No. 27. The effect of the difference in payroll growth rate does not have a significant impact on the recommended employer contribution rate. We will continue to monitor the situation carefully to ensure that a change is made if necessary.

#### **Appendix D – Glossary of Actuarial Terms**

# Accrued Liability

The total dollars needed as of the valuation date to fund all benefits earned in the past for *current* members.

#### Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability and retirement rates. Economic assumptions include investment return, salary growth and inflation.

#### Actuarial Methods

Procedures employed by actuaries to achieve certain goals of a pension plan. These may include things such as funding method, setting the length of time to fund the past service liability and determining the actuarial value of assets.

### Actuarial Valuation

The determination, as of a valuation date of the normal cost, actuarial accrued liability, actuarial value of assets and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change to their plan provisions.

#### Actuarial Value of Assets

The actuarial value of assets used for funding purposes is obtained through an asset smoothing technique where investment gains and losses are partially recognized in the year they are incurred, with the remainder recognized in subsequent years.

This method helps to dampen large fluctuations in the employer contribution rate.

#### Amortization Bases

Separate payment schedules for different portions of the unfunded liability. The total unfunded liability (or side fund) can be segregated by "cause", creating "bases" and each such base will be separately amortized and paid for over a specific period of time. This can be likened to a home mortgage that has 24 years of remaining payments and a second on that mortgage that has 10 years left. Each base or each mortgage note has its own terms (payment period, principal, etc.)

Generally in an actuarial valuation, the separate bases consist of changes in liability (principal) due to amendments, actuarial assumption changes, or methodology changes and gains and losses. Payment periods are determined by Board policy and vary based on the cause of the change.

### Amortization **Period**

The number of years required to pay off an amortization base.

#### Annual Required Contributions (ARC)

The employer's periodic required annual contributions to a defined benefit pension plan, calculated in accordance with the plan assumptions. The ARC is determined by multiplying the employer contribution rate by the payroll reported to CalPERS for the applicable fiscal year. However, if this contribution is fully prepaid in a lump sum, then the dollar value of the ARC is equal to the Lump Sum Prepayment.

#### **Entry Age**

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension Plan or risk pool. In most cases, this is the same as the date of hire.

(The assumed retirement age less the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member is at hire, the greater the entry age normal cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

#### **Excess Assets**

When a plan or pool's actuarial value of assets is greater than its accrued liability, the difference is the plan or pool's excess assets. A plan with excess assets is said to be overfunded. The result is that the plan or pool can temporarily reduce future contributions.

#### Entry Age Normal Cost Method

An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to produce stable employer contributions in amounts that increase at the same rate as the employer's payroll (i.e. level % of payroll).

#### Fresh Start

When multiple amortization bases are collapsed into one base and amortized over a new funding period. At CalPERS, fresh starts are used to avoid inconsistencies that would otherwise occur.

#### **Funded Status**

A measure of how well funded a plan or risk pool is. Or equivalently, how "on track" a plan or risk pool is with respect to assets vs. accrued liabilities. We calculate a funded ratio by dividing the actuarial value of assets by the accrued liabilities. A ratio greater than 100% means the plan or risk pool has more assets than liabilities and a ratio less than 100% means liabilities are greater than assets.

#### Judges' Retirement System II Actuarial Valuation – June 30, 2008

#### **Normal Cost**

The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost plus surcharges should be viewed as the long term contribution rate.

#### Pension Actuary

A person who is responsible for the calculations necessary to properly fund a pension plan.

# **Prepayment Contribution**

A payment made by the employer to reduce or eliminate the year's required employer contribution.

# Present Value of Benefits

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for current members.

#### Rolling Amortization Period

An amortization period that remains the same each year or does not decline.

#### **Superfunded**

A condition existing when the actuarial value of assets exceeds the present value of benefits. When this condition exists on a given valuation date for a given plan, employee contributions for the rate year covered by that valuation may be waived.

#### Unfunded Liability

When a plan or pool's actuarial value of assets is less than its accrued liability, the difference is the plan or pool's unfunded liability. The plan or pool will have to temporarily increase contributions.